2005 MICHIGAN DEPARTMENT OF AGRICULTURE
EMERALD ASH BORER DETECTION TREE PROGRAM SUMMARY
REVISED MARCH 16, 2005

Introduction

Early detection of Emerald Ash Borer populations existing beyond the generally infested area of southeast Michigan is critical for the successful containment of EAB. The most effective method available for the detection of EAB, especially when populations are small, is the detection tree, or "trap tree". An EAB detection trees is an ash tree that has been "girdled" (a section of bark removed from the circumference of the tree) prior to adult flight to make it more attractive to the EAB. The trees are then felled after adult flight and examined for the presence of developing EAB larvae. This program proved highly effective in 2004, resulting in the detection of EAB infestations in eight new Michigan Counties and serving as the basis for the most recent amendment to the MDA's EAB Quarantine. The program will be expanded in 2005 to provide an even better look at the distribution of EAB in Michigan.

Detection Tree Densities

Detection trees will be deployed statewide to detect populations that have been introduced beyond the generally infested area in southeast Michigan. The density of detection trees throughout the state will depend on their proximity to "gateway" areas (the Macknaw Bridge, St. Clair River and southern state border) and the current EAB Quarantine. The densities and totals are summarized in Figure 1.

Personnel:

The placement, monitoring, and removal of detection trees will be performed by EAB Survey Crews and Crew Leaders, EAB Regulatory Inspectors, PPPM Inspectors, and Environmental Stewardship Conservation District Foresters. Detection tree activities may be supplemented by students, temporary workers, and contracted tree removal firms. Training will take place in early to mid April for all involved personnel.

Time Frame:

Detection trees will be established statewide from mid-April to late-June. Trees along the St. Clair River will be monitored in July and August. Felling and peeling will begin in mid-September and be completed by mid-December.

Locations:

Detection trees will be located statewide at the densities indicated above. To minimize the number of contacts required, detection trees will be placed in roadway rights-of-way when possible. Public Act 283 of 1909, Chapter 1, Section 20 designates the right-of-way of in-use roads as extending 33 feet from the roads centerline. If rights-of-way are not available, trees may be placed on private property with specific permission of the property owner. State and

Federal landowning agencies, the Michigan Department of Transportation, and County Road Commissions will be contacted prior to the initiation of the program to obtain necessary permits.

Approximate locations for all detection trees will be identified in advance of trapping activities and will be based on a evenly distributed grid system. Specific locations of detection trees may be adjusted based on local ash distribution and to maximize trap efficacy by placing traps near high-risk sites, such as campgrounds, nurseries, sawmills, etc. Further, high-risk areas, including prior eradication sites and locations of regulatory incidences, will be more heavily trapped.

Protocol:

Prior to beginning surveys in an area, contacts will be made to the county road commission, extension office, conservation district office, law enforcement offices, etc. Surveyors will use county-level maps to locate pre-assigned sites in which to place detection trees. These sites will be assigned on a townline/range/section basis. Surveyors will locate a qualifying ash tree along a road that bounds the target section, or as close to the section as possible. If a suitable ash tree cannot be located within a reasonable amount of time, the survey crew will attempt to contact private landowners or, if no private property is suitable, move on to the next location. To qualify as a suitable detection tree, a tree must have the following characteristics:

1. the tree lies within a public right-of-way *or* you have permission from the landowner (obtain written permission if possible, but verbal if necessary)
2. there are no obstacles to removing the tree, such as nearby powerlines or telephone lines, a fence or fence post grown into the tree, or a limited area in which to drop, peal, chip, and remove the tree (such as a tree growing along a busy road with no shoulder)
3. the tree is eight or fewer inches in diameter at breast height (DBH) but greater then five inches DBH
4. the tree is naturally occurring and is not a landscape or street tree. (Although planted as landscape trees, ash trees growing in interstate freeway rights-of-way can be used as detection trees.)
5. the tree is an ash

Once a suitable tree has been identified, a standard visual inspection for EAB will be performed. Then the tree will be girdled by using a draw knife to remove all bark and cambium from an area roughly 12 inches wide, 4 feet above the ground, and encompassing the entire circumference of the tree. For trees along the St. Clair River, shrink wrap material will be wrapped around the tree at eye-level and tangle-foot will be applied with gloves, with the band of tangle-foot being 12 inches tall, 1/8 inch thick, and placed around the entire circumference of the tree. A survey data point will be taken on the Trimble GPS unit or paper form (when no Trimble is available) and recorded as a “trap tree placement”. The exact location of the detection tree will also be marked on the county map.

The tree will be marked with green flagging tape tag will be stapled to the girdled area of the tree that identifies the tree as a “Cooperative Emerald Ash Borer Response Project Monitoring Tree”, providing an MDA phone number and a web-site address where people can learn more details about detection trees.

Along the St. Clair River, surveyors will return to all detection trees four to six weeks later. Return trips will be performed in roughly the same order in which the detection trees were set. Tangle-foot will be examined for the presence of adult EAB and replaced if it is more than 25% covered with insects and debris. Any life stages present will be placed forwarded by mail to the State Survey Coordinator by the end of the day. A second survey data point will be taken with the Trimble GPS unit or paper form (when no Trimble is available) and recorded as “trap tree monitoring”.

Beginning in September, Surveyors will return to each detection tree, cut it down, peel all bark from trunk and limbs >1” in diameter, cut the tree into small pieces, and dispose of it on site. If the tree is positive for EAB, the tree will be chipped and disposed of. Any life stages collected will be placed in 80% ETOH and forwarded by mail to the State Survey Coordinator by the end of the day. A final survey data point will be taken with the Trimble GPS or paper form (when no Trimble is available) unit and recorded as “trap tree removal”.

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Proposed 2005 Trap Tree Densities
Revised March 15, 2005